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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/749,180

12/30/2003

Masayuki Tsunekawa

TJK/441

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11/15/2006

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EXAMINER

ECHELMEYER, ALIX ELIZABETH

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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| | | | |
|------------------------------|---------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/749,180 | TSUNEKAWA ET AL. | |
| | Examiner | Art Unit | |
| | Alix Elizabeth Echelmeyer | 1745 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: in the first full paragraph of the Summary of Invention, page 4, "law" should be "low". Also, there are several incidences (i.e. on pages 1 and 2) of improper use of plurals. "Audio-video equipments" should be "equipment".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Reimers et al. (US Patent 6,416,904).

Reimers et al. teach a design and method for making calendered, double side segment coated webs such as for use in non-aqueous rechargeable lithium ion batteries (abstract). Reimers et al. teach a thin metal foil web that is coated with a substance containing an electroactive powder, such as one that is used in lithium ion batteries (column 4 lines 45-57).

Reimers et al. teach that the coating is applied in segments, and that the segments on opposite sides of the web are staggered. Reimers et al. further teach that

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when the staggering is at 2 mm, this is most effective for preventing damage during production, when the web is calendered to press the coated segments (column 5 lines 3-5).

The method for producing this electrode as taught by Reimers et al. includes double side segment coating (column 6 lines 35-67). The segmented coating is applied to a first side of the web. The web is then turned over and run through the same coating machine to produce coated segments on the opposite side. The web is calendered, or pressed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimers et al. in view of Fukumura et al. (US Patent 6,027,835).

The teachings of Reimers et al. as discussed above are incorporated herein.

Reimers et al. teach that the electrode may be spirally wound to create a jellyroll battery (column 8 lines 6-7). The battery may be housed in a cylindrical or prismatic case, and a separator is wound between the anode and cathode (column 2 lines 1-8).

Reimers et al. fail to teach that the electrolyte is poured into the battery case that is then sealed.

Fukumura et al. teach a battery containing an electrode sheet having shifted electrode segments coated on it (abstract). The sheets are wound with a separator and placed in a battery can. An electrolyte is then poured into the can, and it is sealed (Figure 2; column 5 lines 27-40).

It would be desirable to seal the battery case containing the wound assembly and electrolyte, since sealing would prevent contamination or leakage of the electrolyte and enable the battery to be used in implantable or underwater applications.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to seal the battery case containing the wound assembly and electrolyte, since sealing would prevent contamination or leakage of the electrolyte and enable the battery to be used in implantable or underwater applications.

Reimers et al. further teach that various lithium salt and nonaqueous electrolyte solvent combinations may be used in the electrolyte.

Reimers et al. do not explicitly teach that the nonaqueous solvent is organic.

Fukumura et al. teach several examples of organic solvents for electrolytes in lithium batteries (column 7 lines 7-29).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an organic solvent in the electrolyte because the organic solvent would be chemically compatible with the lithium ion battery components of Reimers et al. which requires a nonaqueous solvent.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alix Elizabeth Echelmeyer whose telephone number is 571-272-1101. The examiner can normally be reached on Mon-Fri 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's trainer, Susy N. Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



SUSY TSANG-FOSTER
PRIMARY EXAMINER

Alix Elizabeth Echelmeyer
Examiner
Art Unit 1745

aee